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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,487	03/24/2006	Koji Sahashi	1761.1088	9277

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EXAMINER	
SCHINDLER, DAVID M	

ART UNIT	PAPER NUMBER
2862	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,487	SAHASHI ET AL.	
	Examiner	Art Unit	
	David M. Schindler	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR.1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 24 March 2006 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3/24/2006.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by by Okada (2003/0110860).

As to Claim 1,

Okada discloses a bearing including a stationary race member and a rotatable race member (Page 5, Paragraph [0059]), a wireless sensor unit ((5) in combination with (19) and (20)), a sensor unit mounting device (49) for removably mounting the sensor unit on the stationary race member of the bearing ((Page 11, Paragraphs [0118] and [0121]) and (Figure 9B)), the sensor unit being of one-piece construction including a sensor section ((19) and (20)) for detecting a target of detection ((Page 9, Paragraphs [0102] and [0103]) and (Page 10, Paragraph [0106]) and (Page 11, Paragraphs [0118])), a signal transmitting circuit for transmitting by wireless a sensor signal output from the sensor section ((Page 10, Paragraph [0108]) and (Figure 2) and

(Page 5, Paragraph [0064]) and (Abstract)), and a transmitting antenna ((Figure 1 / note the antenna in box (105)) and (Page 7, Paragraph [0083])).

(It is noted to applicant that the Examiner is interpreting the phrase "one-piece construction" to be met by the fact that the transmission unit (5) and the sensor ((20) in combination with (19)) are integrated together, and thus form one-piece (see Page 11, Paragraph [0118]).

As to Claim 3,

Okada discloses the sensor unit includes as an electric power supply section for driving the sensor section and the signal transmitting circuit, an electric power generator (Page 3, Paragraph [0026]).

As to Claim 4,

Okada discloses the sensor section includes a revolution sensor, the revolution sensor including a pulsar ring (multi-pole magnet) for generating a cyclic magnetic change in a circumferential direction of the pulsar ring and a magnetic sensor fitted in face-to-face relationship to the pulsar ring (Figure 9B), wherein the sensor unit includes the magnetic sensor (20) while the pulsar ring is fitted to the rotatable race member ((Page 5, Paragraphs [0059], [0060], and [0063]) and

(Page 8, Paragraph [0085]) and (Page 10, Paragraphs [0106] and [0114]) and (Figures 5B, 9A, and 9B)).

As to Claim 5,

Okada discloses the sensor unit mounting device includes a fixing ring (49) mounted on the stationary race member (Page 5, Paragraphs [0059], [0060], and [0063]), a socket portion (note the space occupied by (19) and (20) inside (49) provided in the fixing ring for allowing the sensor unit to be removably inserted in a radial direction of the bearing ((Figures 9A and 9B) and (Page 11, Paragraph [0121])), and a retaining portion ((49) in combination with (38)) provided in the socket portion for elastically retaining the sensor unit inserted into the socket portion (Page 11, Paragraphs [0119] and [0120]).

As to Claim 6,

Okada discloses the bearing is a rolling bearing including a plurality of rows of rolling elements (3) interposed between the stationary (1) and rotatable (2) race members (Page 5, Paragraphs [0059] and [0063]).

As to Claim 7,

Okada discloses the rolling bearing is a wheel support bearing assembly used for rotatably supporting a vehicle wheel relative to a vehicle body structure ((Figures 9A and 9B) and (Page 1, Paragraph [0011]) and (Page 4, Paragraphs [0046] and

[0047])), the wheel support bearing assembly including an outer member (1) having a plurality of raceway surfaces and defining the stationary member ((Figure 9A) and (Page 5, Paragraphs [0059] and [0063])), an inner member (2) having raceway surfaces confronting with the raceway surfaces in the outer member and defining the rotatable race member ((Figure 9A) and (Page 5, Paragraphs [0059] and [0063])), and a plurality of rows of rolling elements interposed between the mutually confronting raceway surfaces in the outer and inner members ((Figure 9A) and (Page 5, Paragraphs [0059] and [0063])).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okada (2003/0110860) in view of Miyazaki et al. (Miyazaki) (JP 2003146196 A)

As to Claim 2,

Okada discloses the sensor unit includes, as an electric power supply section for driving the sensor section and the signal transmitting circuit (Page 3, Paragraph [0026]).

Okada does not disclose an electric power receiving section for receiving an electric power by wireless .

Miyazaki discloses an electric power receiving section for receiving an electric power by wireless (Page 8, Paragraphs [0037] and [0038]).

It would have been obvious to a person of ordinary skill in the art to modify Okada to include an electric power receiving section for receiving an electric power by wireless as taught by Miyazaki in order to enable the revolution sensor to detect the number of revolutions and transmit the sensor signal even during the halt of wheel revolution and the low speed wheel revolution (Page 2, Lines 3-9 of Applicant's specification).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Pat. Pub. 2002/0130655, 2007/0018837, and 2005/0258950 which disclose bearing systems with wireless sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Schindler whose telephone number is (571) 272-2112. The examiner can normally be reached on Monday-Friday (8:00AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David M. Schindler
Examiner
Art Unit 2862

DMS

PATRICK ASSOUAD
SUPERVISORY PATENT EXAMINER